REPORT NO. 3 Summary 1971-1973
ISSUED APRIL 1976

CENTER FOR DISEASE CONTROL

LEPROSY

SURVEILLANCE

CONTENTS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL

PREFACE

Information contained in this report is derived primarily from State Health Departments, and the National Morbidity and Mortality Reporting System. This information is preliminary and is intended primarily for those with responsibility for disease control activities. Anyone desiring to quote parts of this report is urged to consult the original investigators for confirmation and interpretation.

Contributions to the Leprosy Surveillance Report are most welcome. Please address to:

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I. SUMMARY

In the period 1971-1973, 419 cases of leprosy were reported to the Center for Disease Control for the United States and Puerto Rico, for an incidence rate of 0.067 cases per 100,000 population per year. Cases reported from California increased from 39 in 1971 to 68 in 1973, while the cases reported from Florida and New York City decreased. The incidence of leprosy in persons who were born in the United States and have always resided here has been relatively stable since 1969, while the total leprosy incidence rate has risen from 0.056 cases per 100,000 population in 1969 to 0.067 cases per 100,000 in 1971-1973 because of an increase in cases acquired elsewhere. Endemic foci of leprosy continue to be seen in Hawaii, Texas, Louisiana, and California.

II. INTRODUCTION

This and the previous leprosy surveillance reports were compiled from information available at the U. S. Public Health Service Hospital Leprosy Registry, Carville, Louisiana, and from state epidemiologists. Starting in January 1970, all cases of leprosy have been reported by state epidemiologists to the Center for Disease Control in both the weekly morbidity telegram and on a national leprosy surveillance form used for this report. Not included in this report is information on patients who entered the United States solely for specialized treatment at the U. S. Public Health Service Hospital at Carville, or non-resident, transient individuals who, once diagnosed, left the country.

III. TERMS AND DEFINITIONS

A number of key terms, employed in this report shall be defined at the outset. A leprosy-endemic state or region is one in which cases of the disease are regularly reported among the lifelong inhabitants. An indigenous case is an individual born and reported in the United States, giving no history of residence or military duty in leprosy-endemic foreign countries or U. S. Territories. The imported category includes both individuals who were foreign-born, and those who were born in the United States, but who have resided in leprosy-endemic foreign regions. Persons born in U. S. Territories with endemic leprosy, i.e. Puerto Rico and American Samoa, are also included in the imported group. Spanish surnamed individuals have been identified by means of a list of over 8,000 such surnames, compiled by the Immigration and Naturalization Service (1).

To calculate incidence rates for indigenous cases, the number of U. S. born residents was used as the denominator.

IV. CASES 1971-1973

During this 3-year period, surveillance reports were filed on 419 cases of leprosy in the United States and Puerto Rico - 137 cases in 1971, 132 cases in 1972, and 150 cases in 1973. The total is 13 more than the number of cases described by the National Morbidity Reporting System for the same period. The annual U. S. incidence rates of reported cases are .067, .063 and .071 cases per 100,000 population for the 3 consecutive years.

Of the 419 cases 359 (84.6%) were reported from 3 states - California, Texas, and Hawaii (Table 1). California cases accounted for 37.9% of the national total (159 cases), and this percentage increased from 28.5% (39 cases) in 1971 to 45.3% (68 cases) in 1973. Cases reported from Texas and Hawaii in the 3 years comprise 19.3% (81 cases) and 27.4% (115 cases) of the totals, respectively; the annual proportion these states reported of total national cases has remained roughly constant since 1971.

Table 1

LEPROSY BY PLACE OF REPORT, UNITED STATES AND PUERTO RICO, 1971-73

	Place of Report								
	CA	FL	LA	NYC	TX	HI	PR	OTHER U. S.	TOTAL
Year									
1971	39	4	2	3	27	33	1	29	137
%	28.5	2.9	1.5	2.2	19.7	24.1	0.7	30.4	100%
1972	52	0	1	1	28	43	0	7	132
%	39.4	0	0.8	0.8	21.2	32.6	0	5.3	100%
1973	68	0	2	0	26	39	1	14	150
%	45.3	0	1.3	0	17.3	26.0	0.7	9.3	100%
Total	159	4	5	4	81	115	2	49	419
%	37.9	1.0	1.2	1.0	19.3	27.4	0.5	11.6	100%
Avg. Annual Reported Incidence (Newly reported cases per 100,000 population)	0.260	0.018	0.045	0.017	0.233	4.70	0.023	0.010	0.067

Of the 80 indigenous cases recorded in the 3-year period, 73 (91.3%) were reported from California, Texas, and Hawaii (Table 2). These are the only states in the nation, with the exception of Louisiana and possibly Florida, where leprosy is currently endemic. Texas reported the majority of indigenous cases - 57.5% (46); Hawaii and California contributed 23.8% (19) and 10.0% (8) of the total, respectively. Louisiana continues to represent a small endemic focus of disease. During 1971-73, 3 indigenous cases were reported, accounting for 3.8% of the national total. No indigenous cases were reported in Florida over the 3-year period. Of the remaining 4 indigenous cases, reported from non-endemic states, 2 occurred in individuals giving a history of previous residence in leprosy-endemic regions of Texas. One Pennsylvania-reported case occurred in a native of Key West, Florida. The remaining case, reported in Mississippi, was in a 55-year-old black lumberjack, a native Mississippian, with no history of residence in leprosy-endemic states, travel abroad, or overseas military duty. In this instance, the source of exposure to the disease is not clearly apparent.

Table 2

LEPROSY BY PLACE OF BIRTH, PLACE AND YEAR OF REPORT
USA, 1971-73

		Place of Birth: U. S. Born			Born U. S. Territories			Foreign-Born							Total Imported	All Cases
		Indigenous	Imported*	Total	Samoa	Puerto Rico VI	Total	Mexico	Philippines	Cuba	West Indies C. America S. America	Africa Asia Pacific	Europe Australia Canada	Total		
1971	CA	2	6	8	2	0	2	17	7	2	1	2	0	29	37	39
	TX	13	2	15	0	0	0	10	0	0	0	2	0	12	14	27
	HI	5	2	7	10	0	10	0	16	0	0	0	0	16	28	33
	Other	4	3	7	0	2	2	2	3	8	5	10	1	29	34	38
	Total	24	13	37	12	2	14	29	26	10	6	14	1	86	113	137
1972	CA	2	3	5	6	0	6	29	8	1	0	3	0	41	50	52
	TX	21	1	22	0	0	0	5	0	0	0	1	0	6	7	28
	HI	8	0	8	13	0	13	0	21	0	0	1	0	22	35	43
	Other	3	1	4	0	0	0	0	1	0	2	2	0	5	6	9
	Total	34	5	39	19	0	19	34	30	1	2	7	0	74	98	132
1973	CA	4	6	10	6	0	6	27	15	2	1	7	0	52	64	68
	TX	12	1	13	0	0	0	10	1	1	0	1	0	13	14	26
	HI	6	1	7	7	1	8	0	23	0	0	1	0	24	33	39
	Other	0	5	5	0	1	1	2	1	2	1	5	0	11	17	17
	Total	22	13	36	13	2	15	39	40	5	2	14	0	100	127	150
TOTAL	CA	8	15	23	14	0	14	73	30	5	2	12	0	122	151	159
	TX	46	4	50	0	0	0	25	1	1	0	4	0	31	35	81
	HI	19	3	22	30	1	30	0	60	0	0	2	0	62	96	115
	Other	7	9	16	0	3	3	4	5	10	8	17	1	45	57	64
	Total	80	31	111	44	4	48	102	96	16	10	35	1	260	339	419

*Individuals born and reported in the United States who have resided or served in leprosy-endemic foreign parts.

A comparison with 1969-70 statistics (2) showed that there has been a large decrease in cases of leprosy reported from Florida and New York City. Florida reported 17 cases in 1969-70; for 1971-73, a total of 4 cases was reported. In all but one instance, these leprosy cases were in Cubans, and the decline may be explained in terms of a decreasing number of Cuban refugees. New York City reported 13 cases in 1969-70, 11 of these were in foreign-born individuals. Four cases, all in persons born abroad, were reported for 1971-73, suggesting a possible decrease in leprosy importation to New York City. A large increase in the number of cases reported in Hawaii, from 25 (10.7%) in 1969-70 to 115 (27.4%) for 1971-73, resulted from a significant rise in the number of cases in persons born in the Philippines and American Samoa who now live in Hawaii (see below).

Of the 419 cases of leprosy reported for 1971-73, 112 (26.3%) occurred in persons born in the United States. An additional 242 cases (57.7%) were in persons born in Mexico, the Philippines, and American Samoa (Table 2). Comparison of the 1969-70 surveillance data with the data for 1971-1973 shows that there has been a large increase in the number and percentage of U. S. cases in persons born in the Philippines. During 1969-70, there were 26 such cases reported, accounting for 11.2% of total cases. For 1971-73 there were 96 reported cases, representing 22.9% of the 3-year total. These cases were reported primarily by Hawaii and California, in the ratio of 2:1. The number of U. S. cases in Samoa-born persons also rose from 10 (4.3% of cases) in 1969-70 to 44 (10.7%) in 1971-73. All of these cases were diagnosed in Hawaii and California. The percentage of cases in persons born in Mexico has remained roughly constant for the 2 surveillance periods, comprising about 25% of the total cases in both reporting periods.

Information regarding age, sex,and clinical type of disease, available in 416 cases, is presented in Table 3. For purposes of summary the data on lepromatous and dimorphous leprosy, which represent the more contagious forms of the disease (3,4), have been grouped together, as has the information regarding tuberculoid and indeterminate cases. Over the 3-year surveillance period, in 42% (175) of reported cases the patients were under the age of 30 years; in 25% of all cases, the diagnosis of leprosy was made in the third decade of life. Except for the slightly

higher percentage of cases in which lepromatous/dimorphous disease was diagnosed late in life (at age 70 and above), the age distribution was similar for the 2 clinical groups. Males comprised 58.4% of total cases (243), and made up a roughly equal percentage of each clinical category. Information regarding the observed proportions of the various clinical types is presented and discussed in a later section.

Table 3

416* LEPROSY CASES BY AGE, SEX, AND CLINICAL TYPE, UNITED STATES, 1971-73

Age in Years at Diagnosis	Lepromatous and Dimorphous			Tuberculoid and Indeterminate			Total All Forms	Percent Total	Cumulative Percent
	♀ 0	♂ 0	Total	♀ 0	♂ 0	Total			
0-4	0	2	2	1	0	1	3	0.7	0.7
5-9	3	0	3	5	3	8	11	2.6	3.3
10-19	21	13	34	14	8	22	56	13.5	16.8
20-29	42	30	72	18	15	33	105	25.2	42.0
30-39	36	14	50	17	11	28	78	18.8	60.8
40-49	19	19	38	10	14	24	62	14.9	75.7
50-59	24	10	34	10	7	17	51	12.3	88.0
60-69	8	6	14	4	10	14	28	6.7	94.7
70-79	6	9	15	1	0	1	16	3.8	98.5
80-89	3	1	4	0	0	0	4	1.0	99.5
90+	0	0	0	0	1	1	1	0.2	99.7
Unknown	1	0	1	0	0	0	1	0.2	100.0
Total	163	104	267	80	69	149	416	100.0	

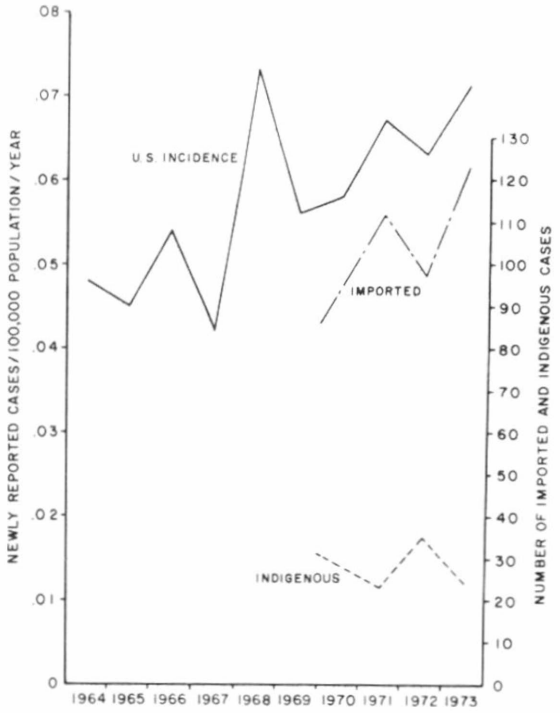
*No information regarding type in 3 cases.

Information regarding duration of illness, obtained at the time of diagnosis by medical personnel, was available in 386 cases. The mean interval from onset of symptoms to diagnosis by clinical type was 6.8 years for lepromatous leprosy, 4.0 years for tuberculoid leprosy, and 2.7 and 2.2 years for the dimorphous and indeterminate forms, respectively. As has been observed in the past (2), this mean interval is shorter for tuberculoid than for lepromatous leprosy. One plausible explanation is that nerve involvement, a frequent early feature of tuberculoid disease, brings this group of patients more quickly to the attention of a physician. Moreover, the presence of such symptoms is also likely to reduce the time required for correct diagnosis. Despite the fairly lengthy mean intervals, approximately one-third of patients of each clinical type were diagnosed in the same year as their described onset of symptoms (lepromatous, 31.6% of cases, tuberculoid, 36.0%, dimorphous, 37.1%, indeterminate, 22.2%), and over 50% of those in each category had been diagnosed by the next calendar year.

The diagnosis of leprosy was confirmed by biopsy in 400 of the 419 cases. In 14 cases of lepromatous leprosy, no biopsy was performed; information regarding this procedure was unavailable in the remaining 5 cases. One hundred-eighteen patients (28.2%) were hospitalized at a U. S. Public Health Service Hospital; 63 at the hospital in Carville, Louisiana, 47 at the hospital in San Francisco, and 8 at the hospital on Staten Island. On the remaining cases, the patients were either admitted to medical school or general hospitals, or treated on an out-patient basis.

V. IS U. S. LEPROSY INCREASING?

Fig. 1 INCIDENCE OF REPORTED LEPROSY, UNITED STATES, 1964-1973



Information regarding the incidence of reported leprosy in the United States for the period 1964-73 is presented in Figure 1. Notwithstanding the peak incidence in 1968, the result of an unusual effort at case finding including many previously diagnosed but unreported cases (the compilation of data for the first leprosy surveillance report), a definite upward trend may be observed in leprosy cases reported and incidence rates over the 10-year period. Since 1969, the increasing incidence rate has closely paralleled a rise in the number of imported cases. The number of indigenous cases has remained roughly constant over the same 5-year period. Part of the increase in imported cases is related to increased immigration from leprosy-endemic areas, notably Mexico and the Philippines. Data from 1971-73 (Table 2) show a steadily increasing number of Mexican and Philippine-born cases; figures from the Immigration and Naturalization Service indicate that there has been a mean increase of nearly 150% in annual legal immigration from these 2 countries between the years 1965 and 1974 (5). Moreover, increases in the numbers of non-immigrants and illegal aliens may be responsible for some of the additional foreign-born cases. This increase in the number of imported cases may also be attributed, in part, to a change in U. S. immigration policy in 1970, which permitted the legal entry of persons with non-infectious leprosy who are under treatment or have been treated. Over the 3-year surveillance period, 38 of the imported cases (11.4%), all but 1 in foreign-born individuals, were reported to be diagnosed and treated prior to U. S. entry. However, in a significant percentage of those 87 cases where onset of symptoms predated arrival in the United States, no information concerning foreign diagnosis or management was reported, making the actual number of pre-treated cases difficult to assess. Treated cases, although they contribute statistically to the pool of U. S. leprosy, pose no significant health hazard to other U. S. residents.

VI. TYPE DISTRIBUTION OF LEPROSY IN THE UNITED STATES

The 419 leprosy cases reported for the 1971-73 surveillance period may be categorized by clinical type as follows: lepromatous (194) and dimorphous (73), 267 cases (62.4%); tuberculoid (120) and indeterminate (28), 148 cases (35.8%). When indigenous cases are considered as a separate group, the distribution is similar: lepromatous (28) and dimorphous (22) - 50 cases (61.7%), tuberculoid (18) and indeterminate (13) - 31 cases (38.3%). In most areas of the world where leprosy is prevalent, the percentage of tuberculoid and indeterminate cases greatly exceeds the percentage of individuals with lepromatous and dimorphous disease (6). Whether the high proportion of lepromatous and dimorphous leprosy, observed in this instance, indicates better case finding, differences in interpretation of clinical presentation or biopsy, or an unusual type distribution in North America is uncertain. In favor of the last hypothesis is the observation that lepromatous or dimorphous disease was diagnosed in 73.5% (155) of those cases in which the patient was born in North America (that is, the Continental U. S. and Mexico), whereas

these 2 clinical types accounted for only 54.3% (113) of reported disease in individuals born outside this geographic zone. However, such findings might result strictly from differences in surveillance activities among the 3 major leprosy reporting states.

VII. ATTACK RATES FOR SELECTED U. S. POPULATIONS

Information regarding incidence rates in selected populations is summarized in Table 4. All calculations are based upon mid-period (1972) population estimates, extrapolated from 1970 and 1973 (projected) census material. The attack rate of indigenous cases for the United States during the 3-year surveillance period was 0.014 cases/100,000 population/year. Excluding California, Texas and Hawaii, presently the major leprosy-endemic states, the average annual attack rate for the nation as a whole drops to 0.001 per 100,000 population, or roughly 2 indigenous cases per year in the United States. Among individual states, Hawaii had the highest average annual attack rate of indigenous cases (0.866 cases/100,000 population), followed by Texas (0.136 cases/100,000 population), Louisiana (0.027 cases/100,000 population), and California (0.014 cases/100,000 population).

Table 4

INCIDENCE RATES FOR LEPROSY FOR SELECTED POPULATIONS
USA, 1971-73

		No. Cases 1971-73
UNITED STATES:		
Indigenous	0.014*	(80)
Indigenous exclusive of CA, TX and HI	0.001	(8)
TEXAS:		
Indigenous	0.136	(46)
Indigenous, SSN$^{\Delta}$	0.574	(33)
Indigenous, Non-SSN	0.046	(13)
Foreign-born SSN	3.520	(24)
CALIFORNIA:		
Indigenous	0.014	(8)
Indigenous, SSN	0.083	(6)
Indigenous, Non-SSN	0.004	(2)
Foreign-born SSN	3.838	(77)
Indigenous, Filipino	0	(0)
Foreign-born Filipino	12.26	(30)
HAWAII:		
Indigenous	0.866	(19)
Indigenous, Non-Filipino	0.751	(15)
Indigenous, Filipino	2.055	(4)
Foreign-born Filipino	56.05	(60)
LOUISIANA:		
Indigenous	0.027	(3)

*All rates represent number of newly reported cases per 100,000 population at risk per year and are based upon mid-period (1972) population estimates.
$^{\Delta}$Spanish surnamed.

Information pertaining to selected subpopulations was tabulated for Texas, California, and Hawaii. Attack rates of indigenous leprosy in persons with

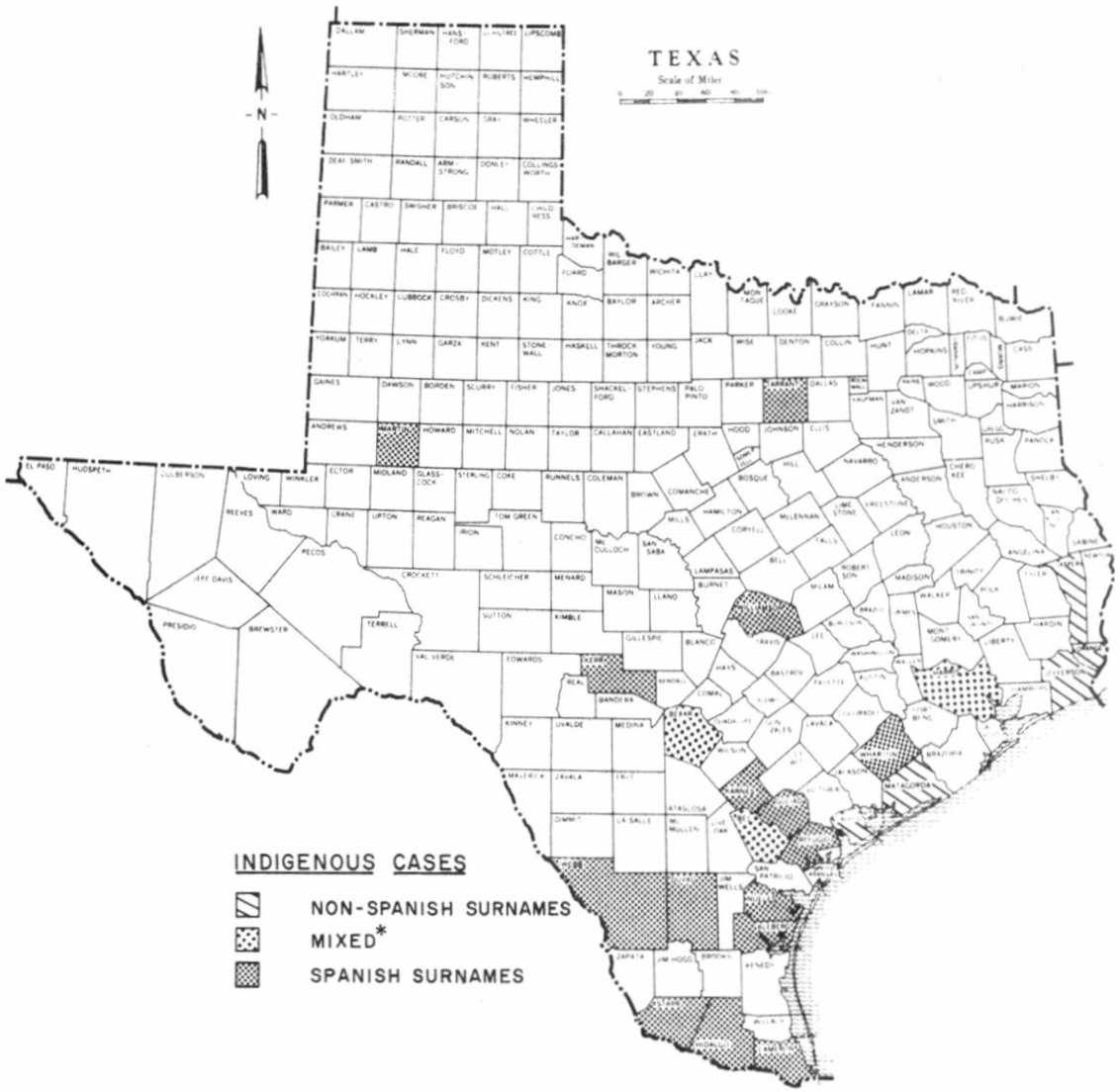
Spanish surnames in Texas and California were 0.574 and 0.083 cases/100,000 population/year, respectively. During the same interval, in Texas and California the incidences of reported leprosy among persons with Spanish surnames born outside the United States were roughly equal (between 3.5 and 4 cases/100,000 population/year), suggesting that Latin immigrants to these 2 states come from populations of similar leprosy endemnicity. These observations imply that there is a lower endemic incidence of leprosy in the population with Spanish surnames of California than of Texas. However, a far greater percentage (66%) of California's U. S. born population with Spanish surnames have lived abroad (primarily in Mexico) than have their Texas counterparts (5.6%). It is possible that a significant number of U. S.-born citizens with Spanish surnames in California may have their disease detected in Mexico, leading to an underestimation of the endemic rate of leprosy in that California population.

Among individuals without Spanish surnames, the attack rate of indigenous leprosy is roughly 10-fold greater for Texas than for California, being 0.046 and 0.004 cases/100,000 population/year, respectively, for the 2 states. California's rate is appreciably lower than the attack rate for the nation as a whole, and, considering the small number of reported cases (2), suggests that the disease is not endemic outside the population with Spanish surnames.

For Texas, patients were examined by county of report in an effort to determine whether those without Spanish surnames represented a local extension of disease in the population with Spanish surnames or a separate, independent focus of leprosy. The results of this investigation are illustrated in Figure 2. It was observed that 61.5% of indigenous cases in persons without Spanish surnames (8) were reported from counties in which there had been no cases in persons with Spanish surnames, for 1971-73, and 6 of these resided in 3 contiguous counties (Jasper, Orange, and Jefferson) along the eastern border of the state. This East Texas focus of leprosy, described by Dickerson in 1968 (7), was initially the result of migration from leprosy endemic French Louisiana. However, none of the present 6 cases recorded in east Texas were in persons with French surnames, or gave a history of previous residence in Louisiana. These findings suggest that a separate, ethnically distinct focus of leprosy has been established in eastern Texas, that may be mainly responsible for the high incidence of disease observed among inhabitants without Spanish surnames in the state.

Incidence and attack rates for persons of Filipino extraction were calculated for California and Hawaii. The attack rate among native Hawaiians of Filipino ancestry - 2.06 cases/100,000 population/year - was equivalent to the incidence of leprosy reported in the Philippines during the same period (1.57 cases/100,000 population/year (8). There were no cases of leprosy reported among U. S. born Filipinos in California. Over the 3-year surveillance period, the incidence rates of reported leprosy for persons of Philippine birth were 56.9 and 12.3 cases/100,000 population/year for Hawaii and California, respectively. The large discrepancy between these rates and the aforementioned attack rate for the Philippines may be explained in part by the fact that many Filipino cases were reported in the United States at the time of recognition here, but had been treated or had their onset of symptoms in the Philippines. Eliminating all such cases from consideration, on the grounds that they reflect prevalence rather than incidence of disease, the attack rates for Philippine-born cases in Hawaii and California were 33.6 and 4.9 cases/100,000 population/year, respectively. The remaining differences in attack rates, as great as they are, may be explainable largely on the basis of differences in surveillance and case reporting in California, Hawaii, and the Philippines. There is considerable evidence from older literature (3,9) that the previously cited leprosy attack rate for the Philippines is artifically low, that the true rate is probably on the same order of magnitude as that described for the Philippine-born Hawaiian population. The difference in attack rates for the Philippine-born populations of California and Hawaii, although probably surveillance-related in part, might also conceivably be explained on the basis of differential patterns of immigration stemming from socioeconomic differences within this group.

Fig. 2 INDIGENOUS LEPROSY CASES, BY COUNTY AND SURNAME, TEXAS, 1971-1973



References

1. U. S. Immigration and Naturalization Service. Supplement to Manual of Immigration Spanish-Spanish Personal Names, selected by Inspector George Lockwood, New York, 1936
2. Center for Disease Control. Leprosy Surveillance, Rep No. 2, January 1972
3. Doull JA: The epidemiology of leprosy. Present status and problems. Int J Lepr 30:48-66, 1962
4. Worth RM, Hirschy ID: A test of the infectivity of tuberculoid leprosy patients. Hawaii Med J 24:116-119, 1964
5. U. S. Immigration and Naturalization Service. 1974 Annual Report Washington, 1974, pp 3, 59
6. Bechelli LM, Dominguez V: Further information on the leprosy problem in the world. Bull WHO 46:523-536, 1972

7. Dickerson MS: Leprosy in Texas. Tex Med 64:39-41, 1968
8. World Health Organization. Infectious diseases: cases, deaths and vaccinations. World Health Statistics Annual 1972, Vol. II. Geneva, 1975, p 39
9. Guinto RS, Rodriguez JN, Doull JA, DeGuia L: The trend of leprosy in Cordova and Talisay, Celon Province, Philippines. Int J Lepr 22:409-430, 1954

FORM APPROVED
OMB NO. 68-R1041

CASE NUMBER

SOCIAL SECURITY NUMBER

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
CENTER FOR DISEASE CONTROL
BUREAU OF EPIDEMIOLOGY
ATLANTA, GEORGIA 30333

LEPROSY SURVEILLANCE

HEALTH JURISDICTION

☐ CASE REPORTED WEEK ENDING ____ 19__
☐ CASE NOT REPORTED
☐ CASE TRANSFERRED FROM _____

Patient's Name -- Last First Middle

Sex ☐ Male ☐ Female

Aliases

Race or Ethnic Group ☐ White ☐ Negro ☐ Other _____

Maiden Name (if married)

Present Address Street or R.F.D. No. City or Town County State

Occupation

Usual Address (if different from above) Street or R.F.D. No. City or Town County State

Date of Birth

Place of Birth County State Country

Date Entered State _____ From Where _____

Date Entered U.S. _____ From Where _____

Citizen of

Residence in USA, or Other Countries, Starting from Present (Including Places of Military Service)

	TOWN	COUNTY	STATE	COUNTRY	Inclusive Dates From Month/Year	Inclusive Dates To Month/Year
1.						
2.						
3.						
4.						
5.						
6.						

Date of Onset

Date doctor first seen for symptoms of leprosy

Date leprosy first diagnosed

Describe Onset

If Therapy Prior to Diagnosis of Leprosy, Drugs(s) Prescribed, Dosages, Dates

Type of Leprosy ☐ Lepromatous ☐ Tuberculoid ☐ Dimorphous or Borderline ☐ Indeterminate

Referring Physician

Biopsy Performed (If yes, by whom, date and site)
☐ Yes ☐ No _____

Acid-Fast Stain of Smear or Section ☐ Yes ☐ No
Date _____

If yes, bacilli seen ☐ Yes ☐ No

Disability and/or Deformity

	Eyes	Hands	Feet	Other _____
Mild	☐	☐	☐	☐
Severe	☐	☐	☐	☐

Current Therapy
Drug(s) _____
Dosage(s) _____

Date Started

Is Patient Hospitalized (if yes, give name of hospital)
☐ Yes ☐ No

Hospital Number

Date

If Not Admitted to Hospital, Name and Address of Physician

Investigated by

CDC 4.267 5-75

I List all LIVING family members who have had a month or more of household contact with the patient. Include members who are not presently in the patient's household but who had such contact in the past. Start with grandparents (paternal and maternal), parents, spouse, brothers, sisters (use married names), and children. Also include other household contacts if any. Use second sheet if necessary.

Name*	Age		Relation to Patient	Full Address				Inclusive Dates of Contact	
	M	F		No.	Street	City	State	From Month/Year	To Month/Year
1 ☐									
2 ☐									
3 ☐									
4 ☐									
5 ☐									
6 ☐									
7 ☐									
8 ☐									
9 ☐									
10 ☐									
11 ☐									
12 ☐									
13 ☐									
14 ☐									
15 ☐									
16 ☐									
17 ☐									
18 ☐									
19 ☐									

*Check box if known or suspected case of leprosy.

II Possible Source: List all known or suspected cases of leprosy in persons (other than those above) who have had any contact with the patient. Note if deceased.

1									
2									

STATE EPIDEMIOLOGISTS

Key to all disease surveillance activities are those in each state who serve the function as State Epidemiologists. Responsible for the collection, interpretation and transmission of data and epidemiologic information from their individual States, the State Epidemiologists perform a most vital role. Their major contributions to the evolution of this report are gratefully acknowledged.

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